



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/334,646	06/17/1999	SHUNPEI YAMAZAKI	0756-1984	5565
31780	7590	03/22/2004	EXAMINER	
ERIC ROBINSON PMB 955 21010 SOUTHBANK ST. POTOMAC FALLS, VA 20165			HU, SHOUXIANG	
			ART UNIT	PAPER NUMBER
			2811	

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/334,646	Applicant(s) YAMAZAKI ET AL.	
	Examiner Shouxiang Hu	Art Unit 2811	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8, 11-14, 16-19, 32-34, 38-43, 52, 53, 58-60, 65, 71-73, 75-81 and 100-121 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 08/513,090.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 1-3,8,11-14,16-19,32-34,38-43,52,53,58-60,65,71-73,75-81 and 100-121.

DETAILED ACTION

Response to Arguments

1. In view of the Appeal Brief filed on January 15, 2004, PROSECUTION IS HEREBY REOPENED. New rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 104-121 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Art Unit: 2811

Each of claims 104, 107, 110, 113, 116 and 119 recites the subject matters that the "plurality of channel areas" formed in a semiconductor layer in the second film transistor are "subjected to laser annealing respectively". It can be interpreted as meaning that the individual channel areas are meaningfully defined prior to their respective laser annealing. However, the original disclosure lacks an adequate description regarding such subject matters. Normally, a channel area can only be meaningfully defined through the formation of the gate electrode and/or the formation of the source/drain regions; but, according to the original specification and the drawings (Figs. 1A-3), the semiconductor layer (103) in the instant invention undergoes laser annealing before any of the gate and/or the source/drain regions are formed.

It is in contrast to the case of US Patent 6,355,940, in which (see Figs. 11-12) the individual channel areas are naturally defined with the formation of the underlying gate electrode (11) prior to the laser annealing. It is also noted that the invention of US Patent 6,355,940 results in a device with polycrystalline channel areas, while the instant invention results in a substantially different device in which the channel areas are of a monocrystalline material.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 8, 11-14, 16-19, 32-34, 38-43, 52, 53, 58-60, 65, 71-73, 75-81 and 100-103 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

Art Unit: 2811

failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Each of claims 1-3 and 8 recites the limitations that "a common source wiring connected with said at least two transistors at one of source and drain of each of said at least two transistors; a common drain wiring connected with said at least two transistors at the other of the source and drain of each of said at least two transistors". However, the scope of such limitations includes the situation that the source of one transistor is connected with the drain of the other transistor through the common source or drain wiring, which would be unreadable on the specification (see col. 10, lines 51-57) and the drawings (see Fig. 3) of the instant disclosure.

Furthermore, each of claims 1-3 and 8 recites the limitations that "wherein channel-forming regions of said at least two transistors are separately provided in at least two separate semiconductor layers respectively". However, among various possible interpretations, such limitations may be interpreted as meaning: the two transistor for formed of two different semiconductor layers (on different levels). It would then be unreadable on the specification and the drawings (see Fig. 3) of the instant disclosure, since the channel regions of the two transistors therein are formed of two separated regions of a same semiconductor layer.

Allowable Subject Matter

4. Claims 1-3, 8, 11-14, 16-19, 32-34, 38-43, 52, 53, 58-60, 65, 71-73, 75-81 and 100-103 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Interference

5. Claims 104-121 of this application are asserted by applicant to correspond to claims 1, 2 and 4 of U.S. Patent No. 6,355,940.

First, the examiner does not consider the subject matters of claims 104-121 of this application are fully supported by its original disclosure, in view of the claim rejections under 35 U.S.C. 112, first paragraph, set forth above in this Office action.

Furthermore, the examiner does not consider these claims to be directed to the same invention as that of U.S. Patent No. 6,355,940 because the invention of US Patent 6,355,940 results in a device with polycrystalline channel areas, while the instant invention results in a substantially different device in which the channel areas are of a monocrystalline material.

Accordingly, an interference cannot be initiated based upon these claims.

6. It is noted that the patentee of U.S. Patent No. 6,355,940 is to be notified under 37 CFR 1.607(d) that an applicant is seeking to provoke an interference with that patent. The identity of the applicant will not be disclosed unless an interference is declared.

Art Unit: 2811

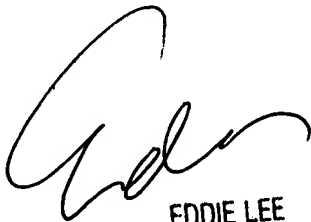
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shouxiang Hu whose telephone number is 571-272-1654. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH
March 16, 2004



EDDIE LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800